



Top 10 Reasons to Go to Physical Therapy During the Early Stages of Parkinson's Disease

1. Did you know that your brain can change? This ability is called **neuroplasticity**. Through research-based exercise programs, a physical therapist can teach you how to optimize brain change to promote learning and maintaining your motor skills. It is important to take advantage of neuroplasticity as early in the disease process as possible!^{1,2,3}
2. There are some studies that suggest that exercise has **neuroprotective properties**, meaning that exercise releases chemicals that can help protect your neurons. Again, it is important to take advantage of this as early in the disease process as possible.^{2,4}
3. It is very common for people with Parkinson's disease to think that the **size of their movements** is normal because their movements feel normal to them. However, these every day movements (ex. Length of your steps while walking) ARE smaller and slower than normal, even in the earliest stages of the disease. A physical therapist can teach you strategies to retrain your brain or to compensate.^{5,6}
4. Even in the early stages of Parkinson's disease, it can be difficult to **activate** their muscles and their core accurately and speedily. A physical therapist can help you strengthen your muscles and teach you how to use them better during every day activities.^{5,6}
5. **Gait problems** can be seen even at the earliest stages of Parkinson's disease. A physical therapist can teach you how to improve your walking speed, quality, and ability to walk and do another task at the same time through various techniques.^{5,6,7,8,9,10,11}
6. **Balance problems** can also be seen at the earliest stages of Parkinson's disease. A physical therapist can assess your balance and make balance exercise recommendations to optimize your balance during household and community activities.^{5,6,11,12}
7. Sometimes your ability to **participate in community activities** you love can be affected even at early stages in the disease process. A physical therapist can design exercises to improve your strength and flexibility so that you can continue to participate in these community activities. Your therapist can also make suggestions on how to modify the activity, if needed.^{5,6,7}

8. A physical therapist can teach you an individualized **home exercise program** based on your flexibility, strength, balance, and gait. By performing this program daily, you are not only helping your body move better, but you may also be promoting brain changes!^{2,3,5,6}
9. A physical therapist is an excellent resource to **recommend community-based programs** to participate in after your physical therapy episode of care is complete. These programs can continue to challenge your gait and balance and help you maintain or improve your flexibility and strength.¹³
10. **Knowledge is power!** A physical therapist can teach you about the motor problems that are common in Parkinson's disease. Your therapist can also teach you how to optimize your ability to make brain changes, how to reduce your risk for falling, and how to take charge of the size of your movements.

References:

- 1) Kleim JA, Jones TA. Principles of experience-dependent neural plasticity: Implications for rehabilitation after brain damage. *Journal of Speech, Language, and Hearing Research*. 2008;51:S225-S239.
- 2) Petzinger GM, Fisher BE, Van Leeuwen JE, et al. Enhancing neuroplasticity in the basal ganglia: the role of exercise in Parkinson's disease. *Mov Disord*. 2010;25 Suppl 1:S141-5.
- 3) Nieuwboer A, Rochester L, Müncks L, Swinnen SP. Motor learning in Parkinson's disease: limitations and potential for rehabilitation. *Parkinsonism Relat Disord*. 2009;15 Suppl 3:S53-8.
- 4) Hirsch MA, Farley BG. Exercise and neuroplasticity in persons living with Parkinson's disease. *Eru J Phys Rehabil Med*. 2009;45(2):215-29.
- 5) Farley BG, Fox CM, Ramig LO, McFarland DH. Intensive amplitude-specific therapeutic approaches for Parkinson's Disease: Toward a neuroplasticity-principled rehabilitation model. *Topics in Geriatric Rehabilitation*. 2008;24:99-114.
- 6) King LA, Horak FB. Delaying mobility disability in people with Parkinson disease using a sensorimotor agility exercise program. *Phys Ther*. 2009;89(4):384-93.
- 7) Brauer SG, Morris ME. Can people with Parkinson's disease improve dual tasking when walking? *Gait Posture*. 2010;31(2):229-33.
- 8) Herman T, Giladi N, Hausdorff JM. Treadmill training for the treatment of gait disturbances in people with Parkinson's disease: a mini-review. *J Neural Transm*. 2009;116(3):307-18.
- 9) Morris ME, Ianssek R, Galna B. Gait festination and freezing in Parkinson's disease: pathogenesis and rehabilitation. *Mov Disord*. 2008;23 Suppl 2:S451-60.
- 10) Morris ME. Locomotor training in people with Parkinson's disease. *Phys Ther*. 2006;86(10):1426-35.
- 11) Nutt JG, Horak FB, Bloem BR. Milestones in gait, balance, and falling. *Mov Disord*. 2011;26(6):1166-74.
- 12) Dimitrova D, Horak FB, Nutt JG. Postural muscle responses to multidirectional translations in patients with Parkinson's disease. *J Neurophysiol*. 2004;91(1):489-501.
- 13) Hirsch MA. Community-based rehabilitation for Parkinson's disease: from neurons to neighborhoods. *Parkinsonism Relat Disord*. 2009;15 Suppl 3:S114-7.